SENSOR BIOMETRICS

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SensAbility Snapshot

Real-Time Device Validation with Physical-Layer Signal Monitoring

How SensAbility helps verify device identity and detect abnormal behavior in real time

Applications

Predictive maintenance
Device validation and authentication
OT/ICS integrity monitoring
Legacy and multi-vendor equipment assurance
Embedded and connected device environments

Partnership Opportunities

SensAbility is building a partner ecosystem with sensor OEMs, OT/ICS monitoring vendors, and system integrators. Partners can extend existing condition monitoring, validation, and asset management offerings with physical-layer device identity, operational integrity monitoring, and earlier visibility into drift and abnormal behavior across industrial environments.

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Overview

In many environments, the first sign of device trouble is a change in the signal itself. A device may still appear normal at the network layer while its physical behavior shows degradation, replacement, tampering, or another abnormal operating state.

SensAbility addresses that gap by comparing each live signal to a trained physical-layer baseline in real time. That helps teams validate device identity, detect meaningful deviation early, and respond before the issue becomes operational disruption.

The Problem

Logs, credentials, and network identity do not prove that hardware is still the expected device or still behaving normally. In OT, ICS, IoT, and embedded environments, that creates blind spots around unauthorized replacement, spoofing, tampering, and early degradation, especially across legacy and multi-vendor fleets.

The SensAbility Approach

SensAbility uses passive physical-layer fingerprinting to establish a known-good device signature and operating baseline. It then compares live transmissions against that baseline to validate identity and surface meaningful deviations. The platform works without agents, firmware access, or reliance on device self-reporting.

What It Can Help Detect

- Unauthorized device replacement or substitution
- Spoofed or misidentified hardware
- Signal drift and abnormal operating states
- Early maintenance indicators tied to physical degradation

Operational Value

By combining early drift detection with device-level validation, SensAbility can help organizations:

- Validate device identity in real time
- Reduce blind spots below the network layer
- Support faster inspection and maintenance decisions

Deployment Fit

SensAbility is suited for OT, ICS, IoT, and embedded environments where uptime matters and hardware visibility is limited. It is designed for COTS, legacy, and multi-vendor fleets, and supports wired or wireless deployments through SaaS, enterprise, OEM, and edge delivery models.